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(FILE 'HOME' ENTERED AT 09:25:42 ON 25 FEB 2003)

FILE 'REGISTRY' ENTERED AT 09:25:52 ON 25 FEB 2003

L1 4 SEA ABB=ON PLU=ON PHOSPHOFRUCTOKINASE/CN

FILE 'HCAPLUS' ENTERED AT 09:26:06 ON 25 FEB 2003

FILE 'REGISTRY' ENTERED AT 09:26:09 ON 25 FEB 2003

SET SMARTSELECT ON

L2 SEL PLU=ON L1 1- CHEM : 40 TERMS

SET SMARTSELECT OFF

FILE 'HCAPLUS' ENTERED AT 09:26:10 ON 25 FEB 2003

L3 7562 SEA ABB=ON PLU=ON L2

L4 4 SEA ABB=ON PLU=ON L3 (L) (CORYNEFORM OR CORYNEFORM BACTERIA  
OR (BACTERIA (L) CORYNEFORM))

D IBIB AB 1-4

L5 2 SEA ABB=ON PLU=ON L4 (L) (NUCLEIC ACID OR POLYNUCLEOTIDE OR  
NUCLEOTIDE OR DNA OR CDNA )

=> d ibib ab 1-4

L4 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:736394 HCAPLUS

DOCUMENT NUMBER: 137:261991

TITLE: Cloning of 1- and 6-  
**phosphofructokinase** genes from  
**Coryneform bacteria** and their  
attenuation for increasing yields of L-lysine in  
fermn.

INVENTOR(S): Farwick, Mike; Bathe, Brigitte; Brehme, Jennifer;  
Huthmacher, Klaus

PATENT ASSIGNEE(S): Degussa A.-G., Germany

SOURCE: PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002074944	A1	20020926	WO 2002-EP2830	20020314
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
DE 10112992	A1	20020926	DE 2001-10112992	20010317

PRIORITY APPLN. INFO.: DE 2001-10112992 A 20010317

AB The invention relates to a process for the prepn. of L-amino acids, wherein the following steps are implemented: (a) fermn. of the **coryneform bacteria** producing the desired L-amino acid, in which at least the gene coding for 6-**phosphofructokinase** and/or the gene coding for 1-**phosphofructokinase** are/is attenuated, (b) enrichment of the desired L-amino acid in the medium or in the cells of the **bacteria**, and (c) isolation of the L-amino acid, and optionally **bacteria** are employed in which, in addn., further genes of the biosynthetic pathway of the desired L-amino acid are enhanced, or **bacteria** are employed in which the metabolic pathways that diminish the formation of the desired L-amino acid are at least partly switched off. Specifically, 1- and 6-**phosphofructokinase** genes pfkA and pfkB are cloned from *Corynebacterium glutamicum* ATCC13032. These two genes can be attenuated for increasing the efficiency of fermn. of lysine in **Coryneform bacteria**. Methods and culture media for fermentative prepn. of lysine with recombinant bacterial strains transformed with these vectors are also provided. The invention is exemplified by transformation of gene pfkB expression vector pXK99EmobpfkB into a *Corynebacterium* host, which increases the lysine prodn. yield from 15.31 g/L at 12.1 OD660 to 16.89 g/L at 7.8 OD660. The fermentatively prepd. lysine are useful in pharmaceutical industry and food industry, esp., in animal nutrition.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:396523 HCAPLUS

DOCUMENT NUMBER: 135:2880

TITLE: The pfk gene of *Corynebacterium glutamicum* and its use in increasing yields of lysine in fermentation

INVENTOR(S): Mockel, Bettina; Pfefferle, Walter

PATENT ASSIGNEE(S): Degussa A.-G., Germany

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1103613	A1	20010530	EP 2000-125528	20001122
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 19956131	A1	20010531	DE 1999-19956131	19991123
JP 2001186895	A2	20010710	JP 2000-354308	20001121
CN 1297055	A	20010530	CN 2000-132502	20001123
BR 2000005543	A	20010807	BR 2000-5543	20001123

PRIORITY APPLN. INFO.: DE 1999-19956131 A 19991123

AB The pfk gene of *Corynebacterium glutamicum* ATCC13032 encoding a **phosphofructokinase** is cloned and characterized for use in increasing the efficiency of fermn. of lysine by **coryneform bacteria**. The gene was identified by querying a C. glutamicum sequence database for homologs of known pfk genes.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:393183 HCAPLUS

DOCUMENT NUMBER: 135:16690

TITLE: The pfkA gene of *Corynebacterium glutamicum* and its use in increasing yields of lysine in fermentation

INVENTOR(S): Moeckel, Bettina; Pfefferle, Walter

PATENT ASSIGNEE(S): Degussa-Huels A.-G., Germany

SOURCE: Ger. Offen., 12 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10011922	A1	20010531	DE 2000-10011922	20000311
EP 1106622	A2	20010613	EP 2000-122746	20001019
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CN 1297054	A	20010530	CN 2000-132480	20001121
JP 2001186896	A2	20010710	JP 2000-354681	20001121
BR 2000005531	A	20010807	BR 2000-5531	20001123

PRIORITY APPLN. INFO.: DE 1999-19956133 A1 19991123

DE 2000-10011922 A 20000311

AB The pfkA gene of *Corynebacterium glutamicum* ATCC13032 encoding a **phosphofructokinase** is cloned and characterized for use in increasing the efficiency of fermn. of lysine by **coryneform bacteria**. The gene was identified by querying a C. glutamicum sequence database for homologs of known pfkA genes.

L4 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:900776 HCAPLUS

DOCUMENT NUMBER: 134:67152

TITLE: L-lysine production with **coryneform bacterium 6-phosphofructokinase** coding pfk gene

INVENTOR(S): Sugimoto, Masakazu; Nakamura, Jun; Izui, Hiroshi; Kimura, Eiichiro; Ito, Hisao; Nakamatsu, Tsuyoshi; Kurahashi, Osamu

PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000077172	A1	20001221	WO 2000-JP3736	20000608
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000011672	A	20020319	BR 2000-11672	20000608
EP 1195431	A1	20020410	EP 2000-935595	20000608
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

## PRIORITY APPLN. INFO.:

JP 1999-168377	A	19990615
JP 1999-311111	A	19991101
WO 2000-JP3736	W	20000608

AB A **coryneform** bacterium having an enhanced 6-**phosphofructokinase** activity in cell and being capable of producing L-lysine; a process for producing L-lysine in the above **coryneform** bacterium; and a DNA usable in enhancing the 6-**phosphofructokinase** activity, are disclosed. E. coli (pfkB) gene coding for 6-**phosphofructokinase** was expressed in Brevibacterium lactofermentum. Increased prodn. of L-lysine was obsd. in the transformants. A gene (pfk) coding for 6-**phosphofructokinase** was cloned from Brevibacterium lactofermentum.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT